

## **AUTOMATIC FIRE SUPPRESSION SYSTEM COVERAGE IN CONCEALED INTERSTITIAL SPACES**

# **IR 9-1**

References: 2001 California Building Code (CBC), Section 904, CCR.

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2007 CBC, Section 903

National Fire Protection Association (NFPA) 13, Section 5.13.1.1 (1999 edition)

NFPA 13, Section 8.14.1.1 (2002 edition)

SFM Code Interpretation 03-030

Discipline: Fire and Life Safety

This Interpretation of Regulations (IR) is intended for use by the Division of the State Architect (DSA) staff, and as a resource for design professionals, to promote more uniform statewide criteria for plan review and construction inspection of projects within the jurisdiction of DSA, which include State of California public elementary and secondary schools (grades K-12), community colleges, and state-owned or state-leased essential services buildings. This IR indicates an acceptable method for achieving compliance with applicable codes and regulations, although other methods proposed by design professionals may be considered by DSA.

This IR is reviewed on a regular basis and is subject to revision at any time. Please check the DSA web site for currently effective IR's. Only IR's listed in the document at <http://www.dsa.dgs.ca.gov/Pubs/default.htm> (click on "DSA Interpretations of Regulations Manual") at the time of plan submittal to DSA are considered applicable.

**Purpose:** The purpose of this Interpretation of Regulations (IR) is to state the minimum requirements of and provide guidance for applying NFPA 13 (Section 5-13.1.1 - 1999 Edition, and Section 8.14.1.1 – 2002 Edition) as it relates to fire sprinklers coverage in concealed interstitial spaces and as specified by [State Fire Marshal \(SFM\) Code Interpretation 03-030](#).

### **1. GENERAL:**

**1.1 NFPA 13 5.13.1.1 (1999 Edition)** All concealed spaces enclosed wholly or partly by exposed combustible construction shall be protected by sprinklers (see Exceptions 1 through 12).

**1.2 NFPA 13 8.14.1.1 (2002 Edition)** All concealed spaces enclosed wholly or partly by exposed combustible construction shall be protected by sprinklers except in non-combustible concealed spaces where sprinklers are not required to be installed by NFPA 13, Sections 8.14.1.2.1 through 8.14.1.2.15.

**2. FIRE SPRINKLER REQUIREMENTS FOR INTERSTITIAL SPACES:** "Non-combustible" materials for these spaces must meet the 25 flame spread, 50 smoke development ratings. Data cables must meet CEC Section 800-49 and 800-50 as resistant to the spread of fire.

**2.1 Fire Sprinklers Required:** Unless specifically noted in the exceptions shown in the NFPA 13 1999 Edition or listed in the NFPA 13 2002 Edition, all areas not meeting the NFPA 13 criteria, shall have fire sprinklers installed. Any amount of combustible materials or exposed combustible construction will require the installation of fire sprinklers.

**2.2 Sprinklers Used in Lieu of One-Hour Fire Resistive Construction:** When automatic fire sprinklers are used in lieu of one-hour fire resistive construction, the entire building, including non-combustible interstitial spaces, must have sprinklers installed, to provide equivalent protection. Sprinkler omissions allowed by NFPA 13 are not permitted (see SFM Code Interpretation 03-030).

Building plans submitted prior to October 1, 2005 will not be required to have the interstitial spaces sprinklered when fire sprinklers are used in lieu of one-hour fire-resistive construction.

**2.3 Sprinklers not required:** Interstitial spaces need not have the fire sprinklers (as noted in NFPA 13) if all the following conditions are met:

- All items within an interstitial space meet the definition of non-combustible, and
- the space itself is of non-combustible construction, and
- the fire sprinkler system is not used in lieu of one-hour fire resistive construction.